## **PCT**

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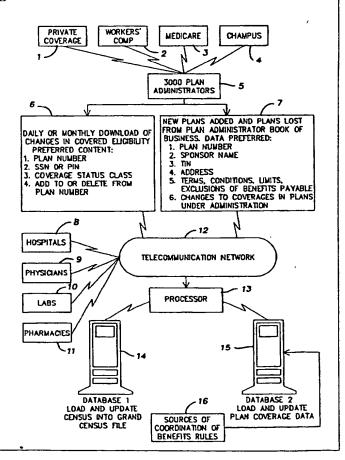
## INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

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#### (54) Title: SYSTEM FOR MEDICAL BENEFITS CLEARINGHOUSE

#### (57) Abstract

A method for operating a computer apparatus for applying the rules for coordination of benefits to claims under medical insurance. The computer has a first database containing a grand census file identifying all individuals by social security number of personal identification number together with the plans under which they are covered. A second database contains information as to the nature of the plan coverage together with the rules for coordination of benefits. When a claim is processed, it is first checked against the individual by identification number in the first database to determine all plans under which coverage could be obtained. Thereafter, the claim is processed for coverage under the information in the second database together with the rules for coordination of benefits to determine primary and secondary coverage. Optionally, the claims may then be processed for payment according to such primary and secondary coverage. All such determinations are then stored in a historical database for future reference.



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## SYSTEM FOR MEDICAL BENEFITS CLEARINGHOUSE

#### BACKGROUND AND SUMMARY OF THE INVENTION

The present invention pertains to a method for data processing, and more particularly to the evaluation of primary and secondary liability among multiple sources and types of medical insurance and benefit plans (a clearinghouse). The method enables automated submission of claims to the source of insurance or benefit coverage which is legally the primary obligor of the medical claim at issue for payment for medical services rendered. This process may involve computer comparison and processing of diverse schedules of benefits and terms of coverage.

The method includes loading into a central database a list of coverage plans preferably by plan number, a list of sponsors of those plans preferably by employer or tax identification number, including the nature and extent of benefits payable under the plans, and a list of all the covered persons under those plans, preferably by social security number (SSN) or a personal identification number (PIN), hereinafter referred to as identification codes, and by the class of coverage which each such person has under each plan. Various other sources and patterns of data are possible under this method.

The method then receives inquiries regarding a claim wherein a given social security number or other identifying code represents the person for whom care was or is about to be rendered. The present invention automatically identifies all sources of insurance coverage for the person identified by that identification code, then applies federal, state, and private rules of coordination among benefit plans to identify

- 31 the primary and secondary coverages.
- 32 Medical billing offices may be supplied with the name, address
- 33 and plan number of the primary coverage payor or of a
- 34 hierarchy of primary, secondary, tertiary, etc., payors.

1 Insurance claims processing offices may then be provided with 2 notice by the clearinghouse as to whether they are the primary 3 or secondary payor on a given claim.

Depending on hardware used, an embodiment of the present invention would allow capture of all the elements of a complete medical bill, including the patient signature. Electronic downloading of claims and proof of care for a given calendar day may be processed through the clearinghouse to the primary and secondary payors at close of business or other predetermined time.

This invention is significantly different from the invention described in U.S. Patent Number 4,491,725. That patent issued for an encoded identification card which allowed medical providers to bill their service by modem. The central process of the '725 patent is the translation of medical billing codes into coverage codes under the patient's insurance plan, and the electronic transfer of funds from the insurance plan to the medical care provider. Patent 4,491,725 did not contemplate the possibility of multiple sources of coverage for any given individual, a phenomenon which exists in many households today. It makes no assertion of an ability to coordinate benefits among plans that cover the same person.

Most Americans are covered today under health insurance of one kind or another, including coverage from over 900 claims companies, and approximately 2,500 insurance administrators. These parties process claims for public and private employee benefit plans, and public welfare programs including Worker's Compensation plans, Medicare, Medicaid, Titles IV, V, and VI, plans for coverage for retired public and private sector employees, plans for the coverage of civilian relatives of military employees (eg: CHAMPUS), supplementary coverage plans, homeowners, casualty insurance, unions, fraternal, social and employers, organizations, the Indian Health Service, the Veteran Affairs Health Programs. Further, the patient himself is often liable for all or part of many medical bills, and that liability may

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be subject to amounts deductible from his general coverage under any of the foregoing insurance programs.

The typical procedure for billing medical services involves an electronic billing process for 80% of Medicare claims, and payment by invoice by virtually all other plans (the vast majority of paid claims). Ordinarily, a medical bill is prepared on paper and mailed to the insurance carrier, claims administrator, or other party indicated by the patient to be the source of his medical insurance coverage.

Frequently, patients err in their statements of coverage, or are unaware of multiple sources of coverage available to them, or have no clear understanding of which of the coverages available to them is, at law, the primary source to pay a given medical bill. For various reasons a subrogation interest to another source of coverage exists for the carrier or claims administrator initially billed for approximately 15-25% of all claims filed in the United States. The result of not naming the correct primary insurance coverage provider is a substantial increase in operating costs for medical care providers and insurance carriers and administrators, and substantial delays in payment of claims, resulting increased capital costs for medical care generally.

In addition, many persons are covered by more than one plan of coverage and fail to disclose this information to either their medical care provider or their insurance carrier or claims administrator.

Claims payors typically have no general source of coverage information for their covered persons other than information volunteered by the covered person, and cannot, prior to the present invention, systematically capture information that would allow full subrogation of claims to which they are secondary payors. The results of this lack of information are a large displacement of claims costs to payors of coverage who have a only a subordinate liability to pay for care, and often more than one payor paying an entire claim resulting in the payee being unjustly enriched.

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Many Americans travel across state lines to work, and have coverage in two or more states, subject to differing state insurance regulations, including coordination of benefits (COB) and subrogation regulations. In addition, many persons have coverage that is administered in a remote, rather than in their own or a contiguous state, or may have coverage under an ERISA-regulated plan that may have adopted non-standard rules for the coordination of benefits. ERISA-based plans are not regulated on the rules of coordination in most states, and thus represent a high-volume challenge to maintain up-to-date COB rules in any coordination system.

Many different classes of coverage exist, for example, regular health insurance, and supplemental insurance which covers the otherwise uninsured risk of the insured person. Current rules of coordination allow for various levels of exactitude in assessing the sources of contribution on any given claim, and the instant invention has the capacity to respond with several different levels of precision with respect to the coordination issue in any given fact situation. Optimal coordination in the context of differing classes of insurance requires coordination on the basis of the medical For example, where a standard commercial service rendered. health insurance plan may omit coverage for vision services, a supplemental vision policy may cover these bills, and to be complete, the COB test would preferably include specification of the service rendered as compared to the services covered under each plan covering a given individual. Thus, where no detail is available, the instant process will identify all sources of insurance. Where no coordination regulations among multiple possible obligors, a significant non-obvious utility of the instant invention is the service of notice to the multiple primary obligors that the others exist, opening a context for voluntary coordination segregation, or contribution to the patient clearinghouse. Where sufficient detail as to a claim exists, a fully detailed and dispositive assessment of the hierarchy

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of obligors and the amounts of their respective and collective obligations can be made.

Thus, the development of a process that can economically provide a comprehensive test of the priority of obligation has been obstructed in the past by a number of forces. These include the high rate of change in enrollment in any of the aforementioned insurance programs (estimated at 5-7 Million enrollment changes per month) and the sheer complexity of the possible sources any individual may have for coverage or indemnity.

There is another layer of complexity that has forestalled development of a clearinghouse of this class, which is the internal management of a given employer, pension, or public benefit plan, and/or a change of vendors which changes the terms of eligibility, benefit schedules, or operating rules, which in turn may affect the outcome of coordination results as between such a plan and other sources of coverage for the individual. Thus, a public retirement health benefit may at some point in time eliminate vision coverage, resulting in a finding by the clearinghouse that the patient's supplementary coverage is, in fact primary, when in the prior month the retirement plan would have been primary. The optimal execution of automated coordination therefore requires up-todate tracking of the content of benefit plans, as well as accurate dating of medical services billed.

The interactive regular (preferably daily) online update of this data is important and represents a large-volume regular transaction and a large-volume of record keeping. However, this process allows the instant invention to permit the same degree of freedom of contract, and the same degree of innovation in the large and complex market for health insurance.

Thus, the patterning of tests within a software program, the purpose of which is to provide a comprehensive test of coordination of benefits, is a project of enormous complexity, with thousands of possible outcomes for an individual claim.

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Use of the invention here described would also in no way restrict evolution and development in the insurance industry, in the management of individual plans, in the development of new state or federal formulae for the coordination of benefit plans or the financial contribution of various organizations on given medical bills, and would not require, but could adapt to, modifications in federal regulation on this subject matter, as the model here at issue is adaptable to changing coordination rules and rules affecting coordination.

Until the present time the common supposition has been that an insurmountable barrier to automated COB existed in the variety of hardware and software choices used by medical providers insurance administrators and in their work. Heretofore, the presumption has been that a national or international standard for electronic communication of benefit documents was necessary to attempt automated COB or electronic This presumption is incorrect. billing. Contemporary technology allows for the translation of differing operating systems and software programs into other such formats without significant modification of either system or program, and makes the otherwise prohibitive cost of retooling the billing and claims systems in a national economy unnecessary.

One example of the means by which this complex pattern of coverages and varying coordination rules can lead to willful abuse of the providers of coverage would be the case of a Medicare-covered person who also has employer-provided private insurance, insurance as a dependent on a spouse's out-of-state employer-provided private insurance, supplemental insurance, and workers compensation coverage. Such a person, suffering an accident injury, may, under the current method, file claims against all five plans and receive indemnification from all of them. Various authorities have estimated the 1991 cost of fraud, error, and manhours consumed in efforts to correctly coordinate benefits as being between \$63,000,000,000 and \$90,000,000,000.

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The invention here described would, under the current rules of coordination, excuse Medicare and the spouse's employer-provided insurance as secondary coverages, and would introduce the patient's primary (employment) coverage to the supplemental carrier an/or the workers' compensation provider for resolution of contribution formulae or the system would identify the correct primary obligor by application of rules of coordination of benefits. The instant invention may use diagnostic coding to gain an indication of the most probable obligor as between the employment and workers' compensation insurance. All of these tests may be implemented at the time medical service was rendered and/or at the time any or all of the above-listed sources of coverage processed claims from the injury at issue. No significant time would elapse before this coordination process was complete, and little or no human effort would be expended to capture and delete these multiple payments.

The solution of these related problems requires that participating sources of insurance coverage or medical benefits deposit data or make data accessible to a clearinghouse, preferably including:

- a) the social security number and/or other identifying code of each person having a right to benefits under any plan operated by the insurance carriers or claims administrator;
- b) the effective date of coverage and termination under the coverage at issue;
- c) the plan number(s) under which such person is covered;
- d) the nature of the coverage, its terms and limitations, the benefits payable, as a subfile of each such plan number;
  - e) the class of coverage under which each individual is covered (e.g.: employee, spouse, child, retiree. . .); and
  - f) mailing, tax identification, and other control data for the plan of coverage and its center(s) for claims administration. Because of turnover in persons covered under

any given plan or method of coverage, this data should be updated frequently, for example, daily.

The present invention would allow the claims processor to make an automated or telephonic inquiry on the social security number or other identifying inquiry on the social security number or other identifying code of the person at issue, and to determine from a computerized database of the clearinghouse that the applicant has coverage as an employee from another carrier or claims administrator. The carrier or making the administrator inquiry may be advised, electronically or telephonically, that it was secondary to the employer plan, and ought not to pay on the claim at issue without evidence of the primary payor's processing and payment.

The present invention thus eliminates to a great extent the need for human effort in coordination of benefits, beyond the establishment of a data link between the claims processing office computer systems and those of the clearinghouse. The present invention would establish to a high degree of reliability, primary and secondary liability, thus transferring claims to appropriate payors, and capturing both erroneous and intentional double billings.

By extending access to the clearinghouse to medical care providers, the care provider may identify primary and secondary payors by data link or telephonically. The result of this access and report would be the elimination of errors in routing accounts receivable, and the elimination of manhours in efforts to identify correct sources of primary coverage. Providers may include physicians, hospitals, pharmacies, laboratories, or other person or entities licensed or otherwise authorized under applicable state or territory laws to furnish healthcare items or services.

In a medical care venue, the present invention can establish sources of insurance coverage before admission or delivery of care services, and provides a means to capture:

a) diagnosis code;

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b) date of service rendered
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- c) care code;
- d) patient signature;
- e) payee employer identification number and mailing
  information; and
  - f) various control codes.

The unique method of the present invention can also electronically or on hard copy deliver accounts payable to the correct primary payor, eliminating a significant cost of doing business for medical care providers and insurers alike in the processing, mailing, and maintenance of paper records.

A significant non-obvious utility of a process such as the instant invention is the possibility of an large system of electronic commerce with one step and only one step, and little or no human effort to resolve the issue of primacy in obligation to pay for claims. The utility of this invention is in part in that it reduces the cost, time, and error rate of electronic billing systems by a very large factor insofar as so reduces the processing required to arrive at a correct hierarchy of payors.

Technology exists to capture patient signatures. For example, incorporating an electronic clipboard manufactured by Tappon Moore, Ltd. (or equivalent), would constitute a significant improvement in the security system of medical payment for a high percentage of care services rendered. At present, the majority of medical service bills are generated and paid without the patient's signature to certify that the care has, in fact, been rendered. The absence of proof that medical services were actually rendered has collateral impact in the abuse and manipulation of various benefit plans, as well as a diminution in the audit and cost containment efforts within the health care finance industry.

BRIEF DESCRIPTION OF THE DRAWINGS

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FIG. 1 is an overall view of the method showing the various inputs through the telecommunication network to the processor;

FIGS. 2A, 2B and 2C are a flow chart showing the processing of claims through the method; and

FIG. 3 is a flow chart showing a method of processing claims for payment after the coordination of benefits has been applied to determine the primary and secondary sources of payment.

#### DETAILED DESCRIPTION OF THE PREFERRED EMBODIMENT

Referring to FIG. 1 in greater detail, the method shows that a number of insurance programs such as private coverage 1, Workers Compensation 2, Medicare 3 and Champus 4 by way of example, but not limitation, routinely deposit enrollment and plan change information to the plan administrators, although only four plan sponsors are shown, it is believed that in the current U.S. market there is approximately 2 million separate plan sponsors offering different plans and coverage to the entire U.S. population through 2,500 plan administrators in 1994.

The plan administrators shown at 5 collect all the information and assemble their records and updates so that each maintains a current set of information as provided by the separate plan sponsors.

According to the present invention, there is a further administrators through the plan download from telecommunication network 12 to a central processor 13. This download takes two forms of which the first one indicated at 6 should be done on a daily or monthly regular basis. information should include the plan administrator's serial number for the plan coverage for each individual person and include that person's identification code together with the status or class of coverage under which the person is covered and the nature of the change from the previous information The second download relates to supplied for that person.

plans deleted, new plans added and plans amended among each claims administrator's clientele and represents the data as to the general types of coverage of the plan including the plan number, the information as to the plan sponsors and any changes of any form to the existing plans or added plans. These downloads of data are separated and represented in the drawings as reposing in two databases solely for clarity.

The telecommunication network 12 may be of any type for transmitting data and is shown here in generalized form. Providers also have communication through the network 12 and may include such sources as hospitals 8, physicians 9, laboratories 10 and pharmacies 11 by way of example only, and these providers are the ones who are seeking payment from the payors whose information has been entered through the plan administrators 5.

The processor indicated at 13 is shown as being only a single processor but may in fact use distributed processing as an alternative. The processor 13 serves to link the systems together from the telecommunications network 12 to the databases 14 and 15 which store the information received through the downloads indicated at 6 and 7. database, Database 1 indicated at 14, contains a Grand Census File which is a complete statement for each individual as identified by Social Security Number or Identification Number and the plan numbers under each such person as coverage for insurable claims and is preferably updated on a daily basis for any changes to the source of coverage or the list of covered persons. It is this central data base which utilizes the coordination of benefits rules, and without such a complete database, it is not possible to entirely eliminate or identify dual sources of coverage or payment.

Database 2, indicated at 15 contains the plan coverage data including updates as to the changes provided through the download indicated at 7 regarding plan coverage and conditions. Database 2 also serves as a source of storage for

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the coordination of benefits rules which may be updated as necessary depending upon changes in the law.

FIGS. 2A, 2B and 2C show in continuous form, the flow 3 chart for a computer program utilizing the processor 4 5 together with the databases 1 and 2 indicated at 14 and 15 in The process inquiry server indicated at 19 in FIG. 6 7 2A may be a portion of the processor 13 of FIG. 1. indicates all medical service providers which will query the 8 method to learn the primary carrier for services rendered and 9 these may be the hospitals, physicians, laboratories, etc. as 10 11 indicated at 8-11 of FIG. 1. Also tied into the server 19 are 12 all payors 18 who will be billed by the system for services provided by the providers of 17 and these payors 18 may 13 include insurance companies, public health authorities and the 14 15 like. Thus, all information goes into the server 19 and, in view of the generally universal access that may be had to 16 server 19, it is highly desirable to provide certain forms of 17 security. This security is first addressed at 20 to determine 18 if the person is allowed access to the databases and the 19 If the inquiry is denied 20 server to process the inquiry. access, this decision is placed in storage for security 21 investigation as indicated at 21 and operates to abort the 22 23 inquiry as shown at 22 and report the error to the inquirer at 23 to see if possibly a wrong number has been entered. 24 will be understood that other forms of security may also be 25 used including, requiring special modems to access the server 26 as well as the use of data encription in the inquiry to 27 prevent unauthorized access, etc. 28

If the security operation clears the inquirer for the query, the next step is indicated at 24 is to test the patient's identification code to verify if it is in the database in order to process the inquiry. As shown at 25, if the answer is no, the result is stored for security investigation as indicated at 26 and the inquiry is aborted and the error is reported at 28 to the inquirer to see if possibly a wrong number has been entered. If the number is

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1 verified, then the query proceeds to database 1 as indicated at 29 to compare the social security or personal 3 identification number to all plans of the database and all 4 individuals entered therein. By checking this, the first step 5 at 30 is to indicate if there is multiple coverage, that is, 6 more than one source of coverage for a given social security number or personal identification number. If the answer is 8 no, the plan information is reported to the inquirer at 31 for further options. 9 This may involve reporting the invoice to 10 the primary obligor 32 and this data is further saved in the 11 database 33 to show that a claim has been made.

If there is multiple coverage, the plan terms are retrieved from Database 1 at 34. Then, as shown at 35, a determination is made as to whether the plan terms for each form of coverage exists. If the answer is no, the alternative is to determine primary coverage by class of coverage as indicated at 36 after which the name and other essential information of the primary obligor is reported to the inquirer 37 and the invoice for the claim is remitted at 38 to the primary obligor and the query is saved in historical records database as indicated at 39. If the plan terms exist, then as shown at 40 the ICD 9 and CPT 4 codes (or DRG's or other methods of identifying care rendered) are matched to the coded benefits and coverage found in the plan terms located in Database 1 while certain ICD 9 codes are reported to public health authorities as shown at 41. As shown at decision box 42, the question then is whether the ICD 9 and CPT 4 codes match more than one plan and according to that test if the answer is no, that is the codes match only a single plan, then the decision is made at 43 as to whether coverage is possible under this plan. If no coverage is possible under the plan, then a negative report on coverage finding is reported to the inquirer as shown 44 and the matter saved in the historical records database at 39.

On the other hand, if the codes match more than one plan then it is necessary to go to database 2 to retrieve the

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coordination of benefit rules, then according to these rules, 1 if coverage is possible as determined at 43 then the 2 3 coordination of benefit rules are applied to determine if there is multiple coverage to which the coordination of 4 benefit rules are applicable as indicated at 48. 5 6 answer is no, then a report of possible double coverage is made to the inquirer as shown at 49 and this information is 7 saved in the historical records database at 39. 8 multiple coverage is susceptible to the coordination of 9 10 benefit rules and an affirmative action is obtained at 48, then the computer applies the coordination of benefit rules 11 12 to the multiple sources to determine a hierarchy of legal obligation to indemnify or cover the claims as indicated at 13 51. If the application of these rules indicates only a single 14 coverage, the answer is no and the source of the coverage is 15 reported to the inquirer as indicated at 54 16 information stored in the historical records database 39. 17 the answer is yes, then the coordination of benefit rules will 18 19 rank the sources of coverage at 55 as primary, secondary, tertiary, etc. This entire ranking will be reported to the 20 21 inquirer at 56 and the information stored in the historical records database 39 as indicated. 22

The foregoing description covers the method according to the present invention of determining primary, secondary and other liabilities among the payor as based on a central database of all insured persons. While it reports sources of coverage and ranking of the sources, it does not, in and of itself, provide for further processing of the claims, however, according to the present invention, a further processing of payment and coordination of benefits can be provided as shown in FIG. 3.

The processing of payable amounts and remittances starts with the finding of the primary carrier at 58 using the procedures as set forth in FIG. 2. Once the primary carrier is found, then it is necessary to recover the plan terms from database 2 as shown at 59 as well as retrieve from historical

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records the patient's account with the primary carrier including data such as paid deductibles, paid co-insurance and exhaustion of coverage limitations.

This information as passed on is indicated at 61 to allow the computer to apply an algorithm to adjust the claim item at issue in the inquiry against the plan coverages in the patient's account to determine the net obligation of the plan and the patient on the particular medical service being queried. After the primary obligation has been calculated at 61, any remaining claim amount passes on at 62 to determine if there is any secondary coverage using a repetition of the processes in blocks 59, 60 and 61 to determine any amount payable under a secondary plan. Likewise, if any amount remains, it can be processed at 63 for tertiary, or any other ancillary sources of payment available under the coordination of benefits rules.

After the above has been calculated, the total amounts are tabulated at 64 and the computer then reports a statement of obligation to each payor 65 as well as a notice of billing to the medical service provider at 66. Optionally, a check or other form of remittance is prepared at 67 to the provider and a notice at 68 is sent to the patient of the billing amounts including any remaining amount due directly from the patient. The system periodically (daily) reduces tens or hundreds of thousands of transactions to a statement of net liability among the participating insurance and health care users thereof. Finally, all of the above transactions are recorded in historical records database 69.

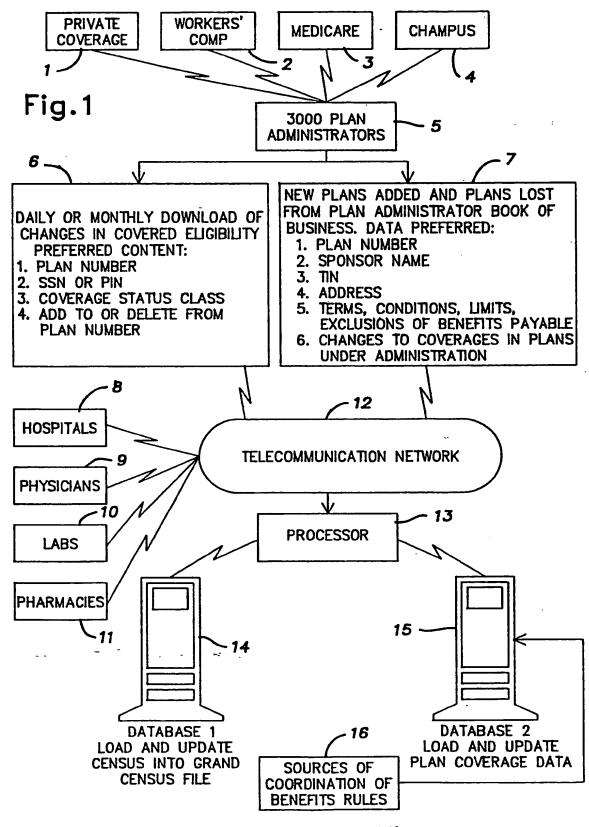
It will be understood that while the above methods have been described as involving a single processor and two databases, but distributed processing can be used and databases can be separated in different locations although communication is necessary among all databases or with or through a central clearing point to allow the complete collection of information to allow the coordination of benefits process.

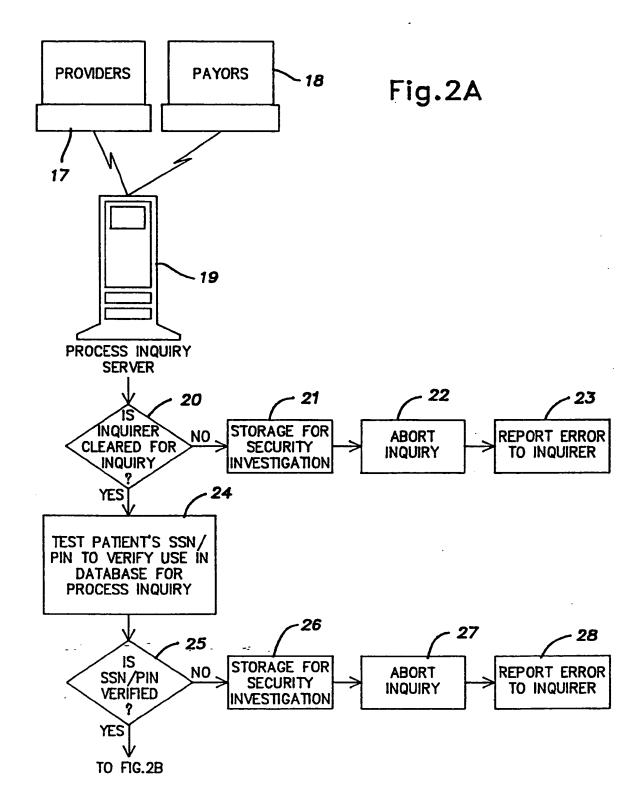
### I CLAIM:

- 1 1. A method for using a computer apparatus comprising 2 a processing unit and a plurality of databases for rapidly 3 determining the primary and secondary sources of health 4 insurance coverage for any person having coverage from any 5 source, public or private, said method comprising the 6 following steps:
- storing 7 а in database of said computer identification codes for each of said persons having health 8 insurance coverage together with plan identification numbers 9 for each such person under which such person has coverage and 10 11 coverage data for each plan,
- storing in a database of said computer rules for the coordination of benefits,
- entering into said processing unit claims for payment under health insurance coverage,
- said processing unit accessing said database for relevant identification codes and plan numbers and relevant plan coverage data, and
- said processing unit thereafter accessing said database for the relevant coordination of benefits rules and applying said rules to determine primary and secondary sources of coverage.
  - 2. The method of claim 1 including the steps of periodically updating said identification codes for said persons in said first database.
  - 1 3. The method of claim 1 including the step of 2 periodically updating said rules for the coordination of 3 benefits in said second database.
  - 4. The method of claim 1 including the additional step
     of reporting primary coverage.

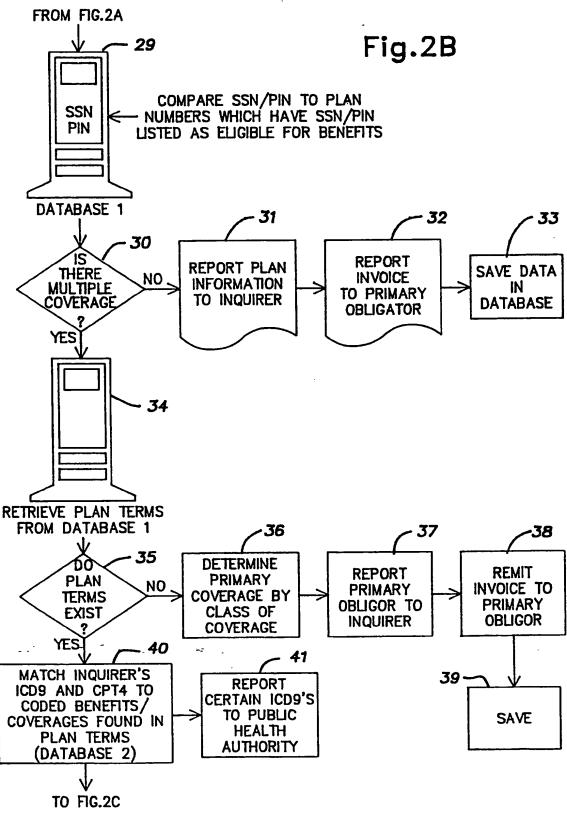
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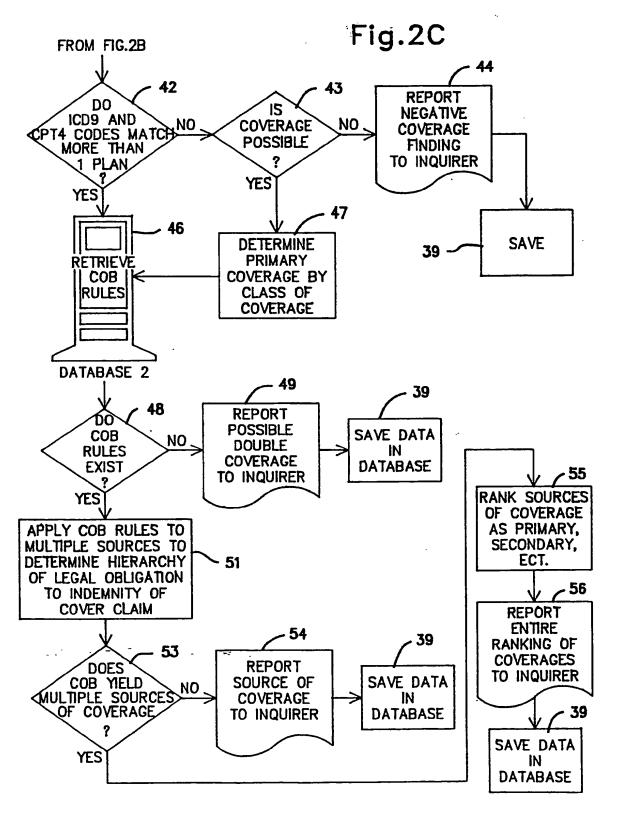
- The method of claim 4 including the additional step of reporting secondary coverage.
- 1 6. The method of claim 4 including the step of processing the financial obligation for payment.
- 7. The method of claim 5 including the step of processing the financial obligations of both said primary and said secondary obligors for payment.
- 1 8. The method of claim 1 including the aggregation of 2 information on financial obligations between and among users 3 of the system.
- 9. The method of claim 1 including the step of storing in the database the results of said determinations.





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